



The elements of success



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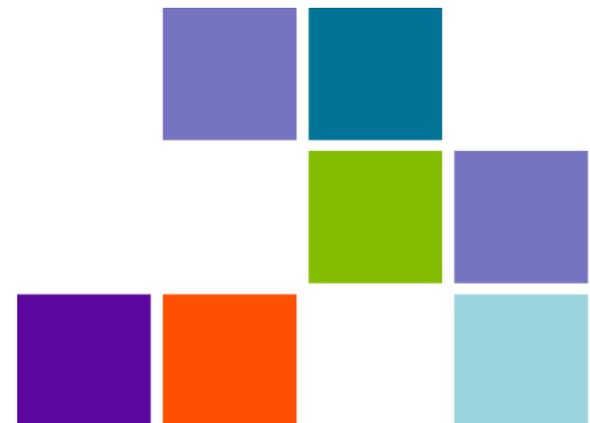
City of Hartford MERF Valuation Review

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Presentation Overview

- Review of Asset Performance Relative to Assumption (7.75%)
- Gains / Losses Relative to Non-Investment Assumptions
- July 1, 2014 Valuation Results – Before Mortality Change
- Assumption Change – Mortality Table Update
- July 1, 2014 Valuation Results – After Change
- Next Steps
- Questions & Answers

Asset Gain / Loss



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Summary of Fund Activity		
	Market Value	Actuarial Value
1. Beginning value 7/1/2013		
a. Trust assets	\$ 969,867,917	\$ 963,269,168
b. Accrued contribution	0	0
c. Benefits payable	0	0
d. Administrative expenses payable	0	0
e. Net: (a)+(b)-(c)-(d)	969,867,917	963,269,168
2. Contributions		
a. Employer contributions during year	42,710,088	42,710,088
b. Employee contributions during year	12,816,246	12,816,246
c. Change in accrued contribution	0	0
d. Total for plan year	55,526,334	55,526,334
3. Disbursements		
a. Benefit payments during year	93,682,709	93,682,709
b. Administrative expenses during year	2,774,099	2,774,099
c. Change in benefits payable	0	0
d. Change in administrative expenses payable	0	0
e. Total for plan year	96,456,808	96,456,808
4. Net investment return		
a. Interest and dividends	16,222,423	N/A
b. Change in accrued income	0	N/A
c. Realized gain (loss)	60,447,581	N/A
d. Unrealized gain (loss)	61,530,272	N/A
e. Expected return	N/A	73,621,333
f. Recognized gain (loss)	N/A	22,957,223
i. Investment-related expenses	(4,586,499)	N/A
j. Total	133,613,777	96,578,556
5. Ending value 7/1/2014		
a. Trust assets: (1a)+(2a)-(3a)-(3b)+(4j)	1,062,551,220	1,018,917,250
b. Accrued contribution	0	0
c. Benefits payable	0	0
d. Administrative expenses payable	0	0
e. Net: (a)+(b)-(c)-(d)	1,062,551,220	1,018,917,250
6. Approximate rate of return 2013-2014	14.1%	10.2%



Asset Gain / Loss

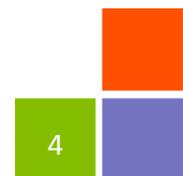


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- Asset gain / loss is relative to the assumed return of **7.75%**
- Actual return for 13-14 was 14.1% which produced a **\$60 million** gain (column a)
- “Smoothing” method only recognized about **\$12 million** (column c)
- Gain reduces contribution compared to expectation by about **\$1.3 million**
- **\$43.6 million** in gains remain at 7/1/2014 (column e)
- Gains not recognized will lead to lower contributions in the future

Recognition of Gain / (Loss) in Actuarial Value

Year	(a) Gain / (loss)	(b) Recognized as of 7/1/2013	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 7/1/2014: (b)+(c)	(e) Not recognized as of 7/1/2014: (a)-(d)
2009-2010	\$ 26,022,852	\$ 20,818,280	\$ 5,204,572	\$ 26,022,852	\$ 0
2010-2011	83,151,652	49,890,990	16,630,330	66,521,320	16,630,332
2011-2012	(58,190,952)	(23,276,380)	(11,638,190)	(34,914,570)	(23,276,382)
2012-2013	3,810,109	762,022	762,022	1,524,044	2,286,065
2013-2014	<u>59,992,444</u>	0	<u>11,998,489</u>	11,998,489	<u>47,993,955</u>
Total	114,786,105		22,957,223		43,633,970



Liability Gains / Losses



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- Liability gains and losses occur when actual experience does not perfectly match the expectation in the assumptions. For example, pay is lower than expected or there are more/fewer deaths or terminations than anticipated.
- For the July 1, 2014 valuation, there was little gain or loss on the liability overall. The expected liability was \$1.31 billion while the actual was \$1.30. As a percentage, the actual liability was only 0.7% lower than expected.
- In 2011, an “Actuarial Experience Study” was conducted. H&H analyzed actual demographic changes over a 5-year period and recommended changes to the assumptions accordingly.
- The fact that there is very little gain or loss on the liability shows that the assumption changes are consistent with actual experience.
- We evaluate experience relative to the assumption with every valuation. Changes in assumptions require additional analysis, usually completed with an experience study.
- Experience studies are generally completed every 5 years so the next study would occur after the data for the 2016 valuation is collected.



Active Data Reconciliation



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Active Participant Counts at July 1, 2014

	Police	Fire	BoE	Muni	Library	Total
July 1, 2013	479	382	973	419	71	2,324
Terminations	-11	-12	-66	-28	-5	-122
Retirements	-27	-4	-17	-10	-1	-59
Disabled	-3	-2	0	0	0	-5
Deaths	0	0	-1	-2	-1	-4
Transfers	-3	+1	+7	-1	0	+4
New Entrants	+4	0	+154	+32	+9	+199
July 1, 2014	439	365	1,050	410	73	2,337

Contribution Calculation



- Actuarially Determined Employer Contribution (ADEC) is the sum of two components:
1) Amortization of Unfunded Liability + 2) Normal Cost.
- The unfunded liability as of July 1, 2013 was amortized over a fixed 25 year period. Future gains or losses are amortized over 15 years on a rolling basis.
- The 25-year fixed payment is \$27.7 million with a \$321.1 million outstanding balance.
- Unfunded liability was \$286.9 million. There was a \$34.2 million gain to be amortized over 15 years.
- Since there were gains the new payment is a credit of \$3.6 million.
- The portion of the contribution attributable to the unfunded liability is **\$24.1 million**



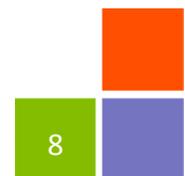
Contribution Calculation



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- The **Normal Cost** represents the value of benefits that are allocated to the upcoming fiscal year under the actuarial cost method.
- The expected Normal Cost as of July 1, 2014 was \$13.66 million. The actual Normal Cost was only **\$12.14 million** leading to a reduction in contribution of \$1.52 million.
- The decrease was due to a decrease in the active population (except BOE) and less than expected salary increases.
- The Net City Contribution after offsets is calculated as follows:

Payment on the Unfunded Liability	\$24.10 million
Normal Cost	\$12.14 million
Load for Plan Expenses	\$ 2.60 million
Adjustment for Interest & Offsets	<u>\$ 1.44 million</u>
Total Net City Contribution	\$40.28 million



Estimated Net City Contribution – Before Changes



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	Police	Fire	BOE	Muni Svcs	Library	Total
Estimated Net City Contribution \$ for Fiscal Year*						
2014-2015 (7/1/2013 Valuation)	\$17,197,000	\$10,253,000	\$4,485,000	\$11,523,000	\$1,119,000	\$44,577,000
2015-2016 (7/1/2014 Valuation)	\$16,512,000	\$9,457,000	\$3,411,000	\$10,079,000	\$823,000	\$40,282,000
Increase/(Decrease)	(\$685,000)	(\$796,000)	(\$1,074,000)	(\$1,444,000)	(\$296,000)	(\$4,295,000)
City Contribution % of Payroll						
2014-2015 (7/1/2013 Valuation)	41.31%	28.88%	9.85%	43.98%	21.94%	28.69%
2015-2016 (7/1/2014 Valuation)	43.01%	29.53%	7.59%	39.62%	18.42%	27.29%
Estimated Payroll for Fiscal Year						
2014-2015	\$41,856,000	\$35,659,000	\$48,786,000	\$27,394,000	\$5,101,000	\$158,796,000
2015-2016	\$38,580,000	\$32,160,000	\$49,205,000	\$26,769,000	\$4,466,000	\$151,180,000

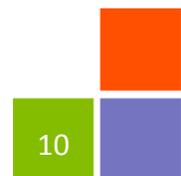
*The actual \$ amount of contribution payable by the City will be based on the applicable contribution % and actual payroll for the fiscal year.

Updated Mortality Table



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- In October 2014, the Society of Actuaries released an updated base mortality table (RP-2014) and mortality scale for projecting future mortality improvements (MP-2014)
- The Society's analysis did not include data from public plans, and therefore the message from the Society has been that it is not necessarily appropriate for use in municipal valuations, but may be – each plan needs analysis by actuary to determine applicability of new table on individual plans.
- The next full assumption review is not due until 2016, however, an interim mortality study was done this year in light of the new tables being released.
- Improvement scale is not an assumption we can validate so we recommend the use of the new MP-2014 improvement scale in place of the current Scale AA.
- Interim study looked at actual deaths over the last 10 years compared to expected deaths using the current assumption (**864 expected deaths vs. 961 actual**). Results indicate the current assumption somewhat overestimated deaths but the group size is not large enough to be fully credible.
- Data supports using the MP-2014 projection scale with the RP-2000 mortality table (collar adjusted as appropriate) set forward 1 year (**895 expected deaths vs. 961 actual**). This is consistent with the current table while using the new projection scale prospectively.



Estimated Net City Contribution – *After* Changes



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- Mortality table change impact increased liabilities 1.5% or \$19.5 million.
- Increase in liability added \$2.1 million to the amortization of unfunded liability
- New table also increased normal cost by \$0.15 million
- Net impact on the contribution was \$2.33 million (including adjustment for interest)
- Lower than prior year’s projection because asset & liability gain more than offset the impact of the mortality.

	Projected July 1, 2014	Actual July 1, 2014 Before Change	Actual July 1, 2014 After Change
1. Market Value of Assets	\$1,000,075,000	\$1,062,551,000	\$1,062,551,000
2. Smoothed Value of Assets (Actuarial Value)	\$1,004,435,000	\$1,018,917,000	\$1,018,917,000
3. Actuarial Liability	<u>\$1,315,354,000</u>	<u>\$1,305,781,000</u>	<u>\$1,325,282,000</u>
4. Unfunded Liability (3. - 2.)	\$310,919,000	\$286,864,000	\$306,365,000
5. Funded Ratio (2. / 3.)	76.36%	78.03%	76.88%
6. Amortization Payment	\$26,457,000	\$24,061,000	\$26,143,000
7. Normal Cost	\$13,659,000	\$12,138,000	\$12,290,000
8. Net City Contribution (ADEC)	\$44,364,000	\$40,282,000	\$42,612,000

Estimated Net City Contribution – *After Changes*



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	Police	Fire	BOE	Muni Svcs	Library	Total
Estimated Net City Contribution \$ for Fiscal Year*						
2015-2016 (Baseline)	\$16,512,000	\$9,457,000	\$3,411,000	\$10,079,000	\$823,000	\$40,282,000
2015-2016 (New Mortality)	\$16,720,000	\$9,805,000	\$4,224,000	\$10,954,000	\$909,000	\$42,612,000
Increase/(Decrease)	\$208,000	\$348,000	\$813,000	\$875,000	\$86,000	\$2,330,000
City Contribution % of Payroll						
2015-2016 (Baseline)	43.01%	29.53%	7.59%	39.62%	18.42%	27.29%
2015-2016 (New Mortality)	43.55%	30.62%	9.24%	42.89%	20.35%	28.83%
Estimated Payroll for Fiscal Year						
2015-2016	\$38,580,000	\$32,160,000	\$49,205,000	\$26,769,000	\$4,466,000	\$151,180,000

Funded Percent



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	Police	Fire	BOE	Muni Svcs	Library	Total
Market Value Asset Basis						
7/1/2013 Valuation	72.5%	79.6%	83.3%	70.4%	67.8%	75.2%
7/1/2014 (Before Mortality Change)	78.0%	85.1%	91.7%	76.5%	79.2%	81.4%
7/1/2014 (New Mortality)	77.6%	84.3%	88.7%	74.8%	77.0%	80.2%
Smoothed Asset Value Basis						
7/1/2013 Valuation	72.0%	79.1%	82.8%	70.0%	67.4%	74.7%
7/1/2014 (Before Mortality Change)	74.8%	81.6%	87.9%	73.3%	76.0%	78.0%
7/1/2014 (New Mortality)	74.4%	80.8%	85.0%	71.8%	73.8%	76.9%

Next Steps

- Decision with regard to mortality table assumption change
- Finalize 7/1/2014 Valuation Report
- Finalize Fiscal Year 2015-2016 Contribution (ADEC)
- Update Funding Projection for Fiscal 2016-2017

